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EXAMINER	
MONIKANG, GEORGE C	

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/748,024	LITTLE, ALEXANDER H.	
	Examiner	Art Unit	
	GEORGE MONIKANG	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation in claim 1, which reads “a circuit within the microphone" is not clear to the examiner. Since a microphone is merely a diaphragm that converts sound wave to electrical signal, it is not clear to the examiner how his microphone includes a circuit which transmits data about the microphone to the external device. Furthermore, figure 5 of the specification shows a microphone separate from a circuit which calls into question whether there is in fact a circuit within the microphone. As such, claims 1-9 will be analyzed and rejected accordingly.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation in claim 1, which reads “a circuit within the microphone" does not correspond with the specification. Since a microphone is merely a diaphragm that converts sound wave to electrical signal, it is not clear to the examiner how his microphone includes a circuit which transmits data about the microphone to the external device. Furthermore, figure 5 of the specification shows a microphone separate from a processing circuit which calls into question whether there is in fact a processing circuit within the microphone as claimed or a processing circuit attached to a microphone within a microphone housing as disclosed in figs. 4-5. As such, claims 1-9 will be analyzed and rejected accordingly.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 7-8, 10, 17-21, 26-31 & 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1.

Re Claim 1, Kim discloses a microphone (*fig. 1: 16; fig. 3: 31; the microphone jack is included to receive a microphone*) comprising: a) an electrical contact for interfacing with an external device (*fig. 1: 16; fig. 3: 31; the microphone jack is included to receive a microphone*); and b) a microphone connected to at least one electrical

contact *(fig. 1: 16; fig. 3: 31; the microphone jack is included to receive a microphone*), which transmits data about the microphone to the external device through the at least one electrical contact *(fig. 1: 16; fig. 3: 31; col. 5, line 62 through col. 6, line 9: the microphone detector 33 is able to determine if a microphone is connected to the microphone jack by detecting the change in voltage level, therefore the microphone detector is able to receive information about the microphone*); but fails to disclose a circuit within the microphone and a plurality of electrical contacts for interfacing with the microphone. Since fig. 5 of the current application shows the circuit was just attached to a microphone, it would have been the designer's preference to attached the microphone detector of Kim directly to the microphone for the purpose of making the system dynamic and cost effective such that it will be cheaper to fix a problem within the detector of Kim as a separate unit than as a unit within the computer system. However, it is the designer's preference to incorporate a plurality of electrical contacts for the purpose of including a plurality of microphones/devices in the system.

Re Claim 7, Kim discloses the microphone of claim 1 where the circuit includes a programmable read only memory storing data (*fig. 2: 21; col. 4, lines 32-47*) that identifies the desired pre-amplifier gain (*fig. 3: 32; col. 5, lines 18-25*).

Claim 8 has been analyzed and rejected according to claim 7.

Claims 10, 17-19 & 26 have been analyzed and rejected according to claim 1.

Claims 20-21 have been analyzed and rejected according to claim 7.

Re Claim 27, Kim discloses the method of claim 26, further comprising modifying at least one setting in the computer system based at least in part on the transferred data

(*fig. 1: 16; fig. 3: 31; col. 5, line 62 through col. 6, line 9: the microphone detector 33 is able to determine if a microphone is connected to the microphone jack by detecting the change in voltage level, therefore the microphone detector is able to receive information about the microphone*).

Claim 28 has been analyzed and rejected according to claim 27.

Claim 29-31 & 33 has been analyzed and rejected according to claim 7.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1 as applied to claim 1 above, in view of Levine, US Patent 6356084 B1.

Re Claim 2, Kim discloses the microphone of claim 1, but fails to disclose where the circuit forces the voltage potential between the at least one electrical contact and another of the plurality of electrical contacts to be zero. However, Levine does (*Levine, col. 2, lines 22-34*).

Taking the combined teachings of Kim and Levine as a whole, one skilled in the art would have found it obvious to modify the microphone of Kim with where the circuit forces the voltage potential between the at least one electrical contact and another of the plurality of electrical contacts to be zero as taught in Levine (*Levine, col. 2, lines 22-34*) so that the other electrical contacts could be isolated from each other.

Claim 3 has been analyzed and rejected according to claim 3.

Re Claim 4, Kim discloses the microphone of claim 1, but fails to disclose where the circuit includes a resistor having a first and a second terminal, the first resistor terminal being connected to the at least one electrical contact, the second resistor terminal connected to another of the plurality of electrical contacts. However, Levine does (*Levine, col. 5, lines 50-56; col. 5, lines 567-60*).

Taking the combined teachings of Kim and Levine as a whole, one skilled in the art would have found it obvious to modify the microphone of Kim with where the circuit includes a resistor having a first and a second terminal, the first resistor terminal being connected to the at least one electrical contact, the second resistor terminal connected to another of the plurality of electrical contacts as taught in Levine (*Levine, col. 5, lines 50-56; col. 5, lines 567-60*) to resist an electric current by producing a voltage drop between terminals.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1 as applied to claim 1 above, in view of Arndt et al, US Patent 6421448 B1.

Re Claim 5, Kim discloses the microphone of claim 1 but fails to disclose where the circuit includes a capacitor having a first and a second terminal, the first capacitor terminal being connected to the at least one electrical contact, the second capacitor terminal connected to another of the plurality of electrical contacts. However, Arndt et al does (*Arndt et al, fig. 2: c3 & c3'*).

Taking the combined teachings of Kim and Arndt et al as a whole, one skilled in the art would have found it obvious to modify the microphone of Kim with where the circuit includes a capacitor having a first and a second terminal, the first capacitor terminal being connected to the at least one electrical contact, the second capacitor terminal connected to another of the plurality of electrical contacts as taught in Arndt et al (*Arndt et al, fig. 2: c3 & c3'*) to store energy between the electrical contacts.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1 as applied to claim 1 above, in view of Papadopoulos et al, US Patent 6128384.

Re Claim 6, Kim discloses the microphone of claim 1, but fails to disclose where the circuit includes an inductor having a first and a second terminal, the first inductor terminal being connected to the at least one electrical contact, the second inductor

terminal connected to another of the plurality of electrical contacts. However, Papadopoulos et al does (*Papadopoulos et al, fig. 3: Lla & Llb*).

Taking the combined teachings of Kim and Papadopoulos et al as a whole, one skilled in the art would have found it obvious to modify the microphone of Kim with where the circuit includes an inductor having a first and a second terminal, the first inductor terminal being connected to the at least one electrical contact, the second inductor terminal connected to another of the plurality of electrical contacts as taught in Papadopoulos et al (*Papadopoulos et al, fig. 3: Lla & Llb*) in order to generate an electromagnetic force.

Claims 9 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1 as applied to claim 1 above, in view of Chiu et al, US Patent 6,882,577 B2.

Re Claim 9, Kim disclose the microphone of claim 1 where the circuit includes a programmable read only memory storing data (*fig. 2: 21; col. 4, lines 32-47*) that identifies the desired pre-amplifier gain (*fig. 3: 32; col. 5, lines 18-25*) but fails to disclose the memory being a serial electrically erasable programmable read only memory. However, Chiu et al does (*Chiu et al, col. 1, lines 14-18*).

Taking the combined teachings of Kim and Chiu et al as a whole, one skilled in the art would have found it obvious to modify the microphone of Kim with the memory being a serial electrically erasable programmable read only memory as taught in Chiu et

al (*Chiu et al, col. 1, lines 14-18*) to provide high voltages for programming and erasing the memory array.

Claim 22 has been analyzed and rejected according to claim 9.

Claims 11-12, 23-25 & 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1 as applied to claim 10 above, in view of applicants admitted prior art (AAPA, para 0003).

Re Claim 11, Kim discloses the interface unit of claim 10, further comprising: c) an amplifier for amplifying an analog signal received from the microphone (*fig. 3: 32; col. 5, lines 18-25*); f) a bus interface coupled to the buffer (*fig. 3: 23 & 41*); and g) an I/O port for communicating with a computer system (*fig. 1: 16; fig. 3: 31; the microphone jack is included to receive a microphone*); but fails to explicitly disclose d) an analog-to-digital converter, coupled to the amplifier (*AAPA, para 0003*). However, AAPA does.

Taking the combined teachings of Kim and AAPA as a whole, one skilled in the art would have found it obvious to modify the interface unit of further comprising: c) an amplifier for amplifying an analog signal received from the microphone (*fig. 3: 32; col. 5, lines 18-25*); f) a bus interface coupled to the buffer (*fig. 3: 23 & 41*); and g) an I/O port for communicating with a computer system (*fig. 1: 16; fig. 3: 31; the microphone jack is included to receive a microphone*) of Kim with d) an analog-to-digital converter, coupled to the amplifier (*AAPA, para 0003*) as taught in AAPA for signals to be processed so that the sound appears to originate from a selected location.

Claim 12 has been analyzed and rejected according to claim 11.

Claim 23 has been analyzed and rejected according to claims 10-11.

Re Claim 24, the combined teachings of Kim and AAPA disclose the method of claim 23, further comprising modifying at least one setting in the computer system based at least in part on the transferred data *(Kim, fig. 1: 16; fig. 3: 31; col. 5, line 62 through col. 6, line 9: the microphone detector 33 is able to determine if a microphone is connected to the microphone jack by detecting the change in voltage level, therefore the microphone detector is able to receive information about the microphone and as such, when the computer acknowledges a microphone is connected, it will process the microphone signals accordingly*).

Claim 25 has been analyzed and rejected according to claim 24.

Claim 32 has been analyzed and rejected according to claims 10-11 & 29.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1 as applied to claim 10 above, in view of applicants admitted prior art (AAPA, background), and further in view of Levine, US Patent 6,356,084 B1.

Claim 13 has been analyzed and rejected according to claims 2 & 11.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, US Patent 6594363 B1 and applicants admitted prior art (AAPA, background) as applied to claim 11 above, and further in view of Southworth et al, US Patent 3,950,607.

Re Claim 14, the combined teachings of Kim and AAPA disclose the interface unit of claims 10-11, but fail to disclose wherein the bus interface is coupled to a first

electrical contact, which contains a serial clock signal; and wherein the bus interface is coupled to a second electrical contact, which contains serial data signals. However, Southworth et al does (*Southworth et al, fig. 2; fig. 7; col. 8, lines 10-16*).

Taking the combined teachings of Kim, AAPA and Southworth et al as a whole, one skilled in the art would have found it obvious to modify the interface unit of Kim and AAPA with wherein the bus interface is coupled to a first electrical contact, which contains a serial clock signal; and wherein the bus interface is coupled to a second electrical contact, which contains serial data signals as taught in Southworth et al (*Southworth et al, fig. 2; fig. 7; col. 8, lines 10-16*) to be able to automatically configure audio channel settings.

Re Claim 15, the combined teachings of Kim, AAPA and Southworth et al disclose the interface unit of claim 11, further comprising a switch that is configured to identify a physical parameter of a microphone (*Southworth et al, col. 16, lines 5-7*).

Re Claim 16, the combined teachings of Kim, AAPA and Southworth et al disclose the interface unit of claim 15, wherein the switch is coupled to the bus interface (*Southworth et al, col. 16, lines 5-7*).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEORGE MONIKANG whose telephone number is (571)270-1190. The examiner can normally be reached on 9:00-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GEORGE MONIKANG/ 7/13/2010
Examiner, Art Unit 2614

/Vivian Chin/
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